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1979 LAKE NIPISSING
SHORELINE POLLUTION SURVEY
TOWNSHIP OF SPRINGER



Ontario

Ministry
of the
Environment



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1979 LAKE NIPISSING SHORELINE POLLUTION SURVEY
TOWNSHIP OF SPRINGER

Municipal & Private Abatement
North Bay District
Northeastern Region

1980?

SPRINGER TOWNSHIP - LAKE NIPISSING SHORELINE POLLUTION SURVEY

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I BACKGROUND

In late 1977, the Municipal Council of Springer Township requested that the Ministry of the Environment conduct a cottage pollution survey along the shore of Lake Nipissing, bordering Springer Township.

In the spring and summer of 1978, although the preparatory work had been completed, the survey was not carried out due to manpower constraints and workload.

In 1979, the manpower was made available and the survey was undertaken.

II LOCATION

The survey was conducted along the north shore of Lake Nipissing south of Sturgeon Falls. The survey began at Garden Village Indian Reserve and continued west to the Sturgeon River. The extent of the survey area is shown on Map I.

III DESCRIPTION OF STUDY AREA

The area consists of approximately 101 summer residences and 55 permanent homes. The majority of the population reside permanently in Sturgeon Falls, with the minority from the surrounding area and Sudbury. The working population is either self-employed in the tourist business or commutes to outlying areas such as Verner or as far as Sudbury.

1) Soil and Topography

The terrain is rocky with a considerable slope to the shoreline from Garden Village to the end of Dutrisac Road. Past this, the topography near the shoreline is generally flat and level with the lake resulting in some swampy areas. Many of the cottages are low, poorly drained lots where fill has been brought in. The soil throughout the area is relatively sandy with a touch of stone and silt.

2) Drainage

This is affected by roadside ditches and one creek. Water in

this creek, especially in the area of the mouth, is stagnant with aquatic vegetation becoming prevalent in the latter months of the summer.

IV SURVEYING TECHNIQUES

Because the survey was to be conducted in 1978, the map and list of names of owners had already been compiled.

This year, the work started by matching the list of names with the parcel numbers. The information was then placed on file cards. Folders were prepared for each individual parcel. The missing information required to complete the files was obtained from the Springer Township Office.

A survey form was prepared (see next page) inquiring about the owner's water supply and septic system. General letters were written describing the three categories in which we rated the septic systems.

The survey then began at the first house west of Garden Village. Lot inspections and occupant interviews were conducted between 10:00 A.M. and 4:00 P.M. from June 21st to July 18th, 1979.

Each lot was inspected by a team of two people who shared the following duties:

- 1) filling in the survey form,
- 2) preparing of a plot plan showing location of the cottage, roads, sewage disposal system and the water supply and other buildings,
- 3) sampling of drinking water (if allowed by owner), and
- 4) inspecting of the property for sewage leaks, sewage discharge into lake, and other problems.

After an inspection, the septic system was rated and the appropriate letter was addressed to the owner. If the owner was present, the letter was left at the time of the inspection.

2) Form Letter

The form letters were carried during the survey. When an inspection was completed, the owner then received the appropriate letter describing what we advised him to do.

Lot Description _____

Establishment No. _____

SPRINGER - LAKE NIPISSING POLLUTION SURVEY - 1979

OWNER _____

ADDRESS _____

PERSON INTERVIEWED _____

WATER SOURCE _____ AGE _____ DEPTH _____

WATER SAMPLES TAKEN? _____ RESULTS _____

SEWAGE DISPOSAL SYSTEM _____

AGE _____

SIZE _____

DISTANCE FROM OPEN WATER _____

DISTANCE FROM WATER SUPPLY _____

COMMENTS _____

APPROPRIATE SOLUTION: CLASS 1 & 2 CLASS 4 CLASS 5 CLASS 6

RATING GOOD ADEQUATE SUBSTANDARD PROBLEM

The letters were filled out on the lot and hand delivered or left in the door of the residence. The first page stated what the survey was about and where it was taking place. It also described our rating system.

The second page consisted of three different ratings. The appropriate page was attached, signed and given to the owner (see next pages).

It was found more efficient and less suggestive to ask people to describe their septic system, rather than asking them if it was this type or that type of system.

V SUMMARY OF FINDINGS

A total of 156 buildings (101 summer cottages and 55 permanent residences) along the Lake Nipissing shoreline in Springer Township were examined for the adequacy of their sewage disposal systems.

78% of the permanent residences and 34% of the summer cottages have septic tanks and tile beds. 22% of the permanent residences and 36% of the summer cottages have holding tanks.

47% of the permanent residences and 11% of the summer cottages have sewage disposal systems meeting Ministry regulations; the sewage disposal systems of 40% of the permanent residences and those of 61% of the summer cottages were found to be substandard, but for which there is no evidence of pollution.

13% of the permanent residences and 28% of the summer cottages were serviced by a sewage disposal system which had identifiable problems. The more common problems were:

- dumping sink wastes onto ground,
- full outhouses,
- washing machine discharging onto ground surface (or underground),
- sink wastes going into leaching pit even though there is pressurized water, and
- tank in decrepit state, needing replacement or repairs.

98% of the permanent residences and 48% of the summer cottages have dug or drilled wells. A bacteriological analysis was done



Ontario

SURVEY LETTER

Ministry
of the
Environment

Northeastern
Region

Northgate Plaza
1500 Fisher Street
North Bay, Ontario.
P1B 2H3
(705) 476-1001

Dear

Re: POLLUTION SURVEY - LAKE NIPISSING,
YOUR PROPERTY - LOT: CON:
SPRINGER TOWNSHIP.

As a part of the Ministry of the Environment's continuing efforts to prevent and control pollution, we are conducting a pollution survey of part of the Lake Nipissing shoreline in Springer Township during June and July (1979). Your property has been inspected and evaluated as part of our survey.

On 1979 your property was inspected and has been classified as A), B), and C).

A) Satisfactory

The system meets or exceeds the various standards and regulations, and is not polluting.

B) Substandard

A system which is substandard in terms of size, location, design, or construction, or nature and depth of soil, but for which no evidence of pollution can be seen, or a system about which critical information cannot be determined. We strongly suggest that in the interest of the environment, you upgrade the sewage disposal system. Applications for approval of sewage disposal systems are obtainable from any Ministry of the Environment office or Township office, and are required before any work can be carried out.

C) Polluting

A sewage system rated "polluting" is one in which a direct pollution problem was discovered. We will be contacting the owners of "polluting" systems in the very near future to outline the steps required to alleviate the problem.

.../2

Page 2 - Option 1

Thank you for your cooperation.

If you have any comments or questions, please contact me.

Yours truly,

Gareth Mongrain, C.E.T.,
Environmental Officer.

SS:11

MP-61-02

We have determined that you could install the following sewage systems to bring your property up to present standards, and eliminate the danger of polluting.

A Class 1 sewage system is a privy for the disposal of human body wastes.

A Class 2 sewage system is a leaching pit for the disposal of sink wastes. A pressurized water system is not to be used with a leaching pit.

A Class 4 sewage system is a septic tank and leaching bed.

A Class 5 sewage system is a holding tank for storage or retention of sewage.

A Class 6 sewage system is a proprietary aerobic sewage treatment plant (it requires a leaching bed which is much smaller than a Class 4, but usually more expensive).

Should you have any comments or questions, please feel free to inquire at our North Bay Office (telephone: 705-476-1001).

Yours very truly,

Gareth Mongrain, C.E.T.
Environmental Officer.

SS:11

MP-61-02

In addition to rating your system, we have determined the appropriate solutions which are possible on your lot.

They are as follows.

A Class 1 sewage system is a privy for the disposal of human body wastes.

A Class 2 sewage system is a leaching pit for the disposal of sink wastes. A pressurized water system is not to be used with a leaching pit.

A Class 4 sewage system is a septic tank and leaching bed.

A Class 5 sewage system is a holding tank for storage or retention of sewage.

A Class 6 sewage system is a proprietary aerobic sewage treatment plant (it requires a leaching bed which is much smaller than a Class 4, but usually more expensive).

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Yours very truly,

Gareth Mongrain, C.E.T.,
Environmental Officer.

SS:11

MP-61-02

of water samples from 42 wells. The water from 36 of the tested wells was found to be safe for drinking.

VI ATTITUDE OF PEOPLE TO SURVEY

The people interviewed were generally satisfied with their existing sewage disposal systems, and sometimes expressed surprise at what seemed to be stringent Ministry regulations regarding the size and spacing of the tank and the field bed.

Their attitude to the survey was influenced greatly by the flood which had occurred in the spring of 1979 and had only recently receded. Many cottage owners felt it was ironic for the government to be concerned with the updating of their sewage disposal systems, at a time when substantial damage to houses, landscaping and docks had been caused by the flood. Consequently some were bitter about being asked to improve their systems.

Many cottage owners were unfamiliar with Ministry regulations regarding sewage disposal systems. They rarely perceived a neighbour's system as problem causing, and even if they did, they were reluctant to mention it.

Generally the cottage owners were very concerned with pollution and the proper disposal of sewage. Several times the pollution caused by the Abitibi paper mill in Sturgeon Falls was mentioned.

VII SURVEY RESULTS

1) Sewage Disposal

At each dwelling, the type of sewage disposal system was determined either by information provided by the owner or by ocular inspection. Once determined, the system was rated and placed under its suitable heading (see next page).

A map of the survey area was prepared designating the lots with polluting, substandard or satisfactory sewage systems.

The survey forms completed for each dwelling can be found under Appendix A. This will show all the information determined from the survey about any specific lot or dwelling.

RATING OF PRESENT SEWAGE DISPOSAL SYSTEM

	<u>Houses</u>	<u>Cottages</u>	<u>Total</u>
A) Satisfactory ⁽¹⁾	26	11	37
B) Substandard	22	62	84
C) Polluting	<u>7</u>	<u>28</u>	<u>35</u>
<u>TOTAL</u>	<u>55</u>	<u>101</u>	<u>156</u>

TYPE OF PRESENT SEWAGE DISPOSAL SYSTEM

	<u>Houses</u>	<u>Cottages</u>	<u>Total</u>
Privy ⁽²⁾	9	34	43
Leaching Pit	2	13	15
Septic Tank & Tile Bed	43	34	77
Holding Tank	12	37	49
Aquarobic	1	1	2

(1) for description of categories A, B and C see copy of letter distributed to cottage owners

(2) note that some cottages have more than one of the listed sewage disposal systems.

2) Drinking Water Supplies

At each dwelling, the water supply was determined. Many cottages were found to import their drinking water from Sturgeon Falls and to use the lake water for washing.

The majority of the remaining dwellings had drilled wells, while the minority had dug wells.

Each owner with a well was asked if they would like their water sampled. Water from 79% of the wells was found to be safe for drinking (see next page). In the remaining six cases, the

results were inconclusive in establishing the water's potability.

When the results were received by this office, a form letter was sent to each owner informing them of the results (see next page).

The letter explained how many total coliform bacteria and how many faecal coliform bacteria were found present in the drinking water. If the water was unsafe for drinking, treatment was recommended.

		<u>Houses</u>	<u>Cottages</u>	<u>Total</u>
WELLS	Drilled	48	36	84
	Dug	6	12	18
	None	1	53	54
WATER SAMPLED		27	15	42
RESULTS (1)				
	0-0	20	13	33
	2-0	3	0	3
	10-0	2	1	3
	NOT OBTAINED	2	1	3

3) Identified Problems and Solutions

Seven (7) permanent residences and twenty-eight (28) summer cottages were found to have identifiable problems.

The problems were divided into the following groups:

- 1) Sink wastes were being dumped onto ground (1 house and 9 cottages).

SOLUTION: a leaching pit should be constructed to receive them, if there is no pressurized water.

- 2) Sink wastes were going into leaching pit even though there is pressurized water (1 cottage).

SOLUTION: where there is pressurized water, sink wastes must go into either a holding tank or septic tank.



Ontario

Ministry
of the
Environment

Northeastern
Region

Northgate Plaza
1500 Fisher Street
North Bay, Ontario.
P1B 2H3
(705) 476-1001

September 6, 1979

Dear

Re: RESULTS OF WATER TESTING,
SPRINGER TOWNSHIP SURVEY.

On I collected a sample of your drinking water and submitted it to the Ministry of Health lab for bacteriological analysis.

The results indicate a level of total coliform and faecal coliform per 100 ml. of water.

The Ministry of Health drinking water guidelines indicate that a drinking water supply must have no bacteriological contamination. Enclosed is a copy of the Ministry of Health drinking water guidelines for your information.

Our Ministry recommends the treatment of all surface water supplies. Chlorination or boiling are commonly used as drinking water supply treatment processes.

Drinking water samples should be submitted on a regular basis to monitor the water quality, and ensure a safe supply to all users.

Should you have any further questions, do not hesitate to contact this office.

Yours truly,

Dale Rawlings,

for Gareth Mongrain, CET,
Environmental Officer.

DR:11

Page 12

3) The outhouse is full (1 house and 4 cottages).

SOLUTION: The outhouse can be moved or lye can be poured in.

4) Water from washing machine is not going into tank, but onto surface or underground (3 houses and 2 cottages).

SOLUTION: Water from washing machine must be diverted into either holding tank or septic tank.

5) Either septic tank or holding tank is falling apart (or uncovered or in an otherwise decrepit state) (1 house and 12 cottages).

SOLUTION: Tank must be replaced. Owner advised to apply for a Certificate of Approval.

Relatively few problems were found (35 in all) and 10 of them can be corrected by simply constructing a leaching pit for the reception of sink wastes. In 13 cases, the tank was found to be in poor repair and replacement is suggested.

54% of the buildings (22 houses and 62 cottages) were found to have sewage disposal systems failing to meet Ministry regulations as to size and spacing, however there was no sign of pollution in these cases at the time of the inspection perhaps due to the infrequent use of some of these buildings. Owners of standard non polluting systems were advised of the desirability of upgrading their sewage disposal systems.

Nearly half of the permanent residences (26 of 55) have adequate sewage disposal systems, but only 11 of 101 of those of the summer cottages were judged to be satisfactory.

VIII RECOMMENDATIONS

- 1) The 35 problem sewage disposal systems should be upgraded to eliminate any further discharge of sewage.
- 2) The sewage disposal systems of many of the cottages seem to be adequately treating the sewage, even though they are of considerably insufficient capacity as defined by Ministry regulations. The systems are often old and many Class IV systems are on too small lots. However in most cases, they are working without apparent problem, probably because the cottages are used only two months yearly.

IX CONCLUSION

The majority (78%) of the sewage treatment facilities were judged to be adequate, while 22% need repair or replacement.

APPENDIX A

OWNER'S NAME, PROBLEM AND SOLUTION

	<u>Name</u>	<u>Problem</u>	<u>Solution</u>
2)	A Martha Clemens	- privy is full. - no leaching pit. - sewage in front of house.	- moved or lye put in. - construct leaching pit.
2)	B Alex Stevens	- insufficient holding tank.	- replacement.
6)	Annette Levesque	- broken down holding tank.	- make repairs. - advised to fill out Certificate of Approval.
9)	Michael Fox	- broken down holding tank	- filled out Certificate of Approval for Class 4.
11)	Hubert Stevens	- no leaching pit for sink wastes.	- construct leaching pit.
37)	J.G. Rivet Agencies	- washing machine or toilet or sink wastes leaking onto ground.	- holding tank needs to be replaced.
42)	Madeleine Michaud	- holding tank uncovered.	- holding tank must be repaired or replaced.
48)	Lawrence Gonnella	- outhouse full. - no leaching pit for sink wastes.	- moved or lye put in. - construct leaching pit.
65)	Gaetan Proulx	- holding tank in poor repair.	- needs proper holding tank.
74)	Alex Stevens	- no leaching pit for sink wastes.	- construct leaching pit.
80)	Beatrice Lavoie	- broken down holding tank.	- needs proper holding tank.
85)	Arthur Taillon	- washing machine draining into lake.	- ought to go into tank.
96)	Jean Guy Rivet	- washing machine draining into lake.	- ought to go into tank.
112)	Jean Paul Ferlatte	- sink wastes discharged onto ground surface in front of cottage; there is pressurized water.	- ought to go into tank.

<u>Name</u>	<u>Problem</u>	<u>Solution</u>
117) Therese Lafreniere 121) & 122)	- 2 cottages with virtually non-existent sewage disposal systems. - sewage in ditch.	- new sewage disposal systems required.
132) Onesiphore Marleau	- broken down holding tank.	- replacement.
135) John Toby	- outhouse is full.	- must be moved or lye put in.
141) Edgar Dutrisac	- broken down holding tank.	- replacement.
152) Gilbert Berube	- washing machine discharging into lake.	- must go into septic tank.
175) Therese Robidoux	- pressurized water and leaching pit.	
182) Beaudry	- septic tank disconnected.	
183) Aurele Robert	- no leaching pit for sink wastes.	- construct leaching pit.
193) Ronald Parent	- no leaching pit for sink wastes.	- construct leaching pit.
201) Herve St. Jacques	- outhouse is full.	- move it or pour in lye.
203) Leo Laforge	- needs leaching pit for sink wastes	- construct leaching pit.
204) Maurice Belanger	- outhouse is full.	- move it or pour in lye.
208) Francoise Guindon	- broken down tank.	- replacement; apply for Certificate of Approval.
211) Herve Boissonnault	- washing machine discharging onto ground.	- must go into septic tank.
213) Jean Gagnon	- pipe to leaching pit is leaking.	
218) Hugh Pridmore	- washing machine discharging onto ground.	- must go into tank.
220) Aime Barbe	- outhouse is full.	- move or pour in lye.
222) Andre Riberdy	- pressurized water and leaching pit.	

APPENDIX B
SURVEY SKETCHES FOR EACH LOT

(Not in all reports)

APPENDIX C

SURVEY FORMS FOR EACH RESIDENCE

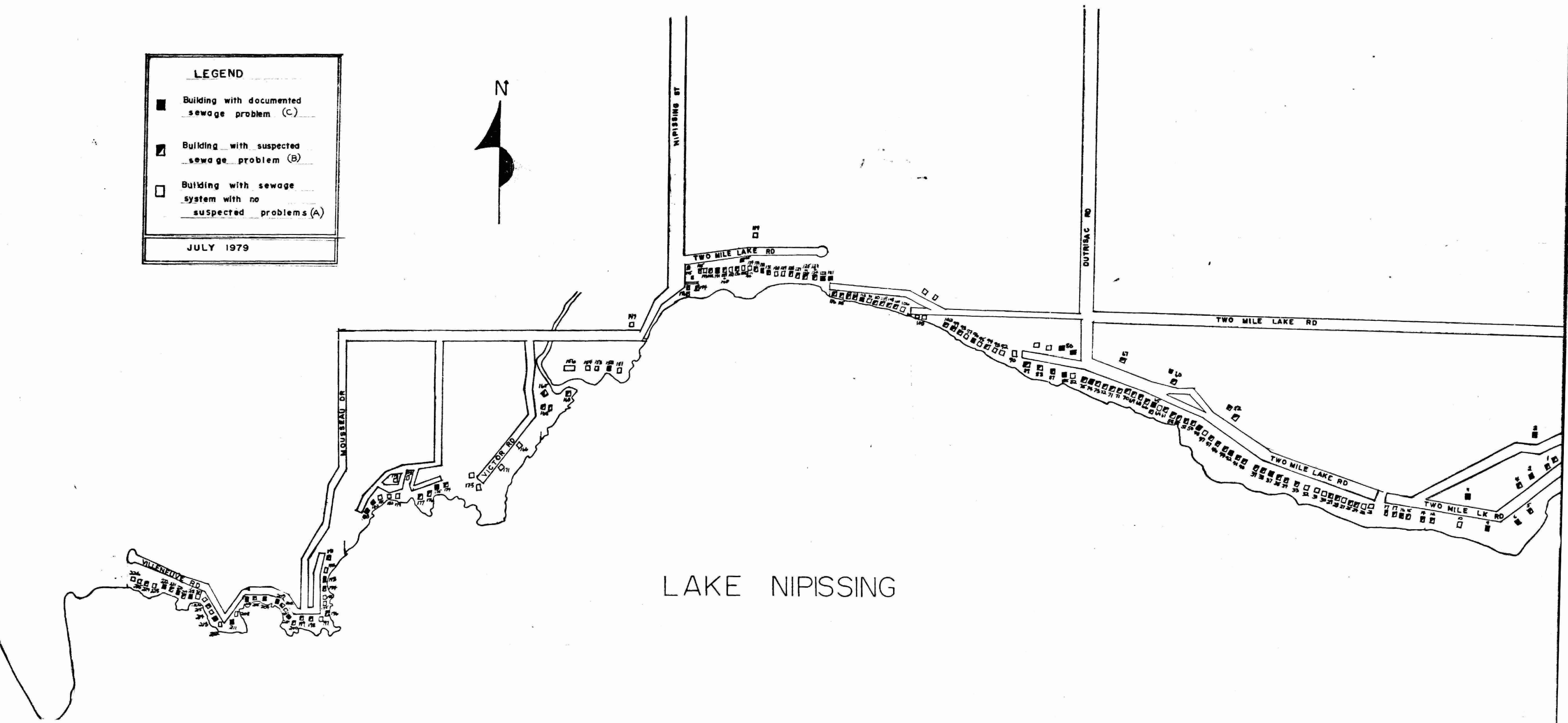
(Not in all reports)

SPRINGER POLLUTION SURVEY AREA

LEGEND

- Building with documented sewage problem (C)
- ▣ Building with suspected sewage problem (B)
- Building with sewage system with no suspected problems (A)

JULY 1979





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